Session 1:
Vocational Content in Mass Higher Education: International perspectives and policy trends

The Changing Status of Vocational Higher Education in Contemporary Japan and South Korea

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This paper is the first production of new project vocationally-oriented higher education institutions in Japan and Korea known respectively as *senmongakko* and *jeonmun daehack*. In recent years, we had individually become aware of the changing role and growing significance of these institutions in the process of our research projects on the higher education reforms taking place in Japan and Korea (Eades, Goodman and Hata, 2005; Hatakenaka, 2004, Kim, 2001). We were also aware not only of our own ignorance of exactly how such institutions operate, but also the apparent lack of research on them. An exhaustive search of the literature in English, Japanese and Korean which we carried out in May/June 2005 confirmed that very little, and virtually nothing of an academic nature, has been published about these institutions. In July/August of 2005, therefore we have undertaken preliminary fieldwork trips to Japan and Korea to visit such institutions and to interview practitioners, policy-makers, educationalists and some students in order to begin to understand how they operate and how we might best carry out an extended project on this sector.

What follows is a very preliminary summary of this first stage of our project in which we seek to locate *senmongakko* and *jeonmun daehack* in a historical, comparative and organisational framework. What are their origins? How have they developed? How do they relate to other elements of the HE sector in Japan and Korea? How has their status been affected by the other changes (economic, political, demographic and social) in their countries? Preliminary fieldwork suggests that this is a very diversified and uncoordinated sector and the difficulties we find characterising it to a large extent reflects this heterogeneous nature. Nevertheless, it is clear that there are some interesting and important questions that this sector raises for our

understanding of not only the relationship between the state and vocational educational institutions in Japan and Korea but this same relationship in any industrially-advanced democracy.

WESTERN PERSPECTIVES OF AND INFLUENCES ON JAPANESE AND SOUTH KOREAN HIGHER EDUCATION

Our interest in Japanese and Korean vocationally HEIs picks up on a more general interest in Japanese and Korean social systems that was widespread in the late-1980s but disappeared in the 1990s. From the beginning of the 1980s, when first the Japanese economy and then the economies of the other so-called Little Tigers (Singapore, Hong Kong, South Korea [Korea hereafter] and Taiwan) began to take off, western observers became interested in the social systems in those countries which might explain their economic growth. Education was an area on which they focused particular attention and, by the late 1980s, it was almost expected that Japan and Korea would be the first place that any new Minister of Education in the US, UK or several other European countries would visit in search of different ways of thinking about their own systems.

The main focus of western observers of Japanese and Korean education was on the primary and secondary levels. In part, this was because children at this stage could (and frequently were) shown to be doing much better in international tests of mathematics and science than their counterparts elsewhere (see, Lynn, 1988: chapter 2, OECD/PISA www.pisa.oecd.org). In part, it was because government investment in education at this level was, in absolute terms, considerably lower than in other OECD countries but with no obvious deleterious effects for the nation either economically or socially.[1] Indeed, despite having larger classes (of often over 50 children) and, by western standards, rather poor physical environments in which to study, these schools generally had much lower rates of absenteeism and juvenile crime. Explanations for the success of Japanese and Korean education ranged from cultural (that there was something in Confucianism which encouraged and gave high status to study which stimulated children, rather as in Judaism in western societies) to politico-economic (the educational systems were designed to meet the economic concerns of the societies by those who ran big business rather than simply as arenas for self-growth) to pedagogical (the concentration on the basics of reading, writing and arithmetic as well as the systematic way these were taught by well-trained teachers meant that all students got a good educational grounding; these systems had little truck with western fashions of developing individual creativity which often serve only the best at the expense of the weaker student).

The literature on the education systems of Japan and Korea, however, contained one very obvious gap. Virtually none of it referred to higher education. This was not

[1] In the late 1980s, total government expenditure as a percentage of gross national product (GNP) was a quarter in Japan - and a half in the other newly-industrialising countries (NICs) - that of Western European societies; but of this expenditure about three times as much in Japan - and twice as much in the other NICs - was spent proportionally on education (Cummings, 1997: 280-2).

because there was no higher education in these societies. Indeed, they all had well-developed systems and a much higher proportion of students went on to post-compulsory and tertiary education in both countries than in European societies; some Japanese and Korean Universities for example could - and sometimes did – trace their histories back many centuries and, in the early 1980s, proportionally at least twice as many young adults in the relevant age group went on to university in Japan (which at that time numbered over 500 four-year and the same number of two-year institutions) than in the UK (where there were only 44 universities and a similar number of polytechnics).[2]

For various reasons, however, whatever happened in its higher education institutions has never been seen as helpful in explaining the so-called 'economic miracle' of Japan and Korea. Some observers (Reischauer, 1983; Cutts, 1987; Hall, 1998) indeed, have argued the opposite - that their economic growth was achieved *despite* their institutions of higher education. In both Japan and Korea, especially during the first two years of four-year courses, and particularly in non-science subjects, there was a sense that university was a kind of moratorium between the horrendous rigour of school 'examination hell' which preceded it and the routine life of the company employee which followed it. In both countries, many students placed more stress on their social life than their academic activities; there was an unspoken rule that, by accepting students, an institution had a duty to graduate them.

If there has been the feeling among western observers that there is little to be learnt from the higher education systems of East Asia, this stands in stark contrast, it would seem, to the interest East Asian policy makers have expressed, historically, in western models (see Altbach, 1989, for an overview of western influence on Asian higher education). In Japan, the Imperial University Ordinance of 1886 that defined the purpose of the modern university system was clearly based on the German and other western models of higher education (Bertholomew, 1989; Beauchamp and Rubinger, 1989: 138), which was transferred to Korea during the colonial period (1910-1945) (Kim, 2001), and the education system in both Japan and Korea was reorganised under US influence following the second world war and political independence in 1945 (Fujimura-Fanselow, 1997: 141; Kim, 2001; Kim, 2005). One critical change, on which we will pick up later, made under the occupation government was that vocational colleges became integrated into universities, a move which was often criticised by the Japanese to have diminished differentiation too much (Schoppa, 1991). Missionary influence (particularly from the US) was crucial in the establishment of the modern Korean university system (Kim, J., 2000a: 21-4; Lee, 1997: 311-14). Moreover, not only have Japanese and Korean higher education systems historically drawn heavily – directly or indirectly - on models from the west in their establishment but, as we shall see, they continue to do so in reforming their current systems (Eades, Goodman and Hata, 2005; Kim, 2005).

[2] According to Nagai (1971: 3), already by the late 1960s, only the US, USSR and India had more students than Japan (in absolute terms) going to universities.

COMPARING JAPANESE AND KOREAN HIGHER EDUCATION

The most common reason that researchers in the past have given for including Japan and Korea within a single project is the belief that they share certain cultural traits. There are also certain economic and political points of overlap between these two societies. In terms of their educational systems, these countries share certain common features as outlined best perhaps by Cummings (1997: 281-6). They share a tendency towards a strong but lean state that takes direct responsibility for the system; a belief that western knowledge can be twinned with eastern values of respect for the state, community, family and authority more generally; and an emphasis on *primary* education. Beyond the primary level, the state concentrates its resources on national priorities (which it will heavily subsidise) but otherwise it will allow the private sector (which in Japan and Korea provides around 75% of tertiary education) to fill the gap between demand and supply. As a result of this emphasis on primary education, the proportion of state educational spending on higher education in Japan and Korea is around one-third of the OECD average (Postiglione, 1997: xvii).[3]

Expansion and growth

The most conspicuous feature of both Japanese and Korean tertiary education systems is the speed with which they have grown. Both countries have 'mass higher education' systems in Martin Trow's (1973) definition of the phrase. Korea's enrolment rate in higher education is now one of the highest in the world. Currently more than 95% of eighteen-year-old children graduate from high schools, and 81.3% of them advance to higher education institutions. In Japan, from just 2.9% in 1947, already by 1980 38% of all 18-year-olds were entering junior colleges or four year universities and, by 1999, in total, over 60% of the 18-22 aged population were in some form of higher education.

The increase in higher education participation rates reflect a number of different factors. On the supply side, there is a recognition that their youth constitutes their main resource and that national investment in young people is a priority. On the demand side, increasing national and personal wealth (related presumably also to shrinking family sizes) has created an enormous expansion in the desire for higher education as a means of investment in oneself and one's family. The rapid growth – and now the large size – of the system, combined with the current economic crises in East Asia, has led to a major reassessment of the role of higher education in Japan and Korea. It is very interesting to observe the similarities in the responses of the two countries.

The Relationship between the State and Higher Education Institutions in Japan and Korea

In Japan, and by extension as a result of its colonial experience in Korea, the continental European model of the relationship between the state authorities and the tertiary education sector (largely copied from Prussia) has predominated in state

[3] The public spending on higher education as a proportion of GDP in 1998 was 0.4% in Japan, 1.3% in United States, 1.1% in the UK and 1.1% in Germany (Akao, 2002: 76).

institutions where employees have been seen as civil servants and the government has kept tight control over curricula, admissions and funding. Even private institutions (which already by the late-1960s were providing around 75% of all tertiary education) which have come under the Ministry of Education in these countries have found themselves forced to comply with this model to a large extent. While employees at such private institutions have not been public employees, they have still been forced to accept heavy control of their courses by their respective Ministries of Education intent on deciding such matters as enrolment quotas, admission procedures, the establishment of new institutions, academic courses and financial allocations (Amano, 1999; Kim, J., 2000: 67-74; Lee, 1997: 315). In the case of Japan, this government intervention could, from 1970 on, be justified to some extent by considerable government subsidies for private education (up to 30% of their total income package in the mid-1980s, though now closer to 10% [Yonezawa and Baba, 1998: 146]), but in Korea generally less than 2% of the income of private universities has ever come from the State (Lee, 1997: 317). In both cases, however, regulation by the respective ministry has remained very tight.

This relationship between higher education institutions and their respective Ministries of Education – a relationship which has remained stable since the systems were established in the modern period - is currently going through possibly its most radical reform process ever. Focusing first on the state-run institutions, these have been turned into independent, autonomous units which will run and have responsibility for themselves while continuing to receive state financial support for which they will be held fully accountable through a variety of quality control mechanisms. To a large degree it is accepted that these reforms are modeled on those which took place in the UK higher education sector in the 1980s under Margaret Thatcher.

What are the expected benefits, from the government's perspective, of such a reform process? Most immediately, it is expected to lead to considerable financial savings on the national budget. Governments in Japan and Korea, however, argue that the reforms are not only financial; they are also ideological. As Royama (1999: 22) puts it, what is being proposed in higher education in these countries is nothing less than a 'big bang' where market forces are expected to determine the future direction of both individual institutions and the sector as a whole. According to each government, the reforms are needed to give autonomy to institutions in order to allow them to become more creative in their research, diverse in their practices and attractive to students and employers. In short, they will need to compete to survive.

Pressure and Conditions for the Market Liberalisation of Higher Education

Arimoto (2000: 98) lists eight key elements behind the current 'third reforming stage' (the first being in the Meiji period, the second during the post-war occupation) of Japanese universities. These are: shift from elite to mass higher education; rapid growth of science and technology; drop in size of eighteen-year-old cohort; economic retrenchment; introduction of market principles; globalisation; change from a 'degree-democracy' society to a life-long learning society; deregulation of charting and strengthening of accrediting of universities; abolition of recruitment agreement between companies and universities. It would appear that while the

reasons for reform are not exactly the same in both countries, there are clear similarities which relate to economic recession, changing patterns of demography and political developments.

Economic recession

It should be no surprise that the slow-down in economic growth in Korea and the recession in Japan through the 1990s has led to irresistible pressure from companies for higher education reform. In both countries there has historically been a clear correlation between university attended and the level of job which someone can obtain. Entrance into a 'top' institution in a clear hierarchy of institutions was sufficient evidence of ability for recruitment for a top job in either the public or private sectors. Once recruited, employees could enjoy job security and expect to be promoted and remunerated on the basis of how long they had served the institution, regardless of their performance. This model, it would seem, has started to disintegrate under the pressure of the slow-down in economic growth. Companies now want to recruit people with specified skills and will promote as much on the basis of merit as loyalty (Takeuchi, 1997). Students, as a result, are becoming more selective of what and not just where they study (Yano, 1997) and more demanding, as Jerry Eades (2001) points out, about what they get for their money. As Kitamura (1997: 148) puts it, Japanese tertiary education is seeing the development of a buyer's markets where 'students will be "courted customers" rather than "supplicants" for admission'. Institutions of higher education are under increasing pressure to respond to these new demands (Arimoto, 1997: 205).

In Korea, there are currently far more university graduates than the local labour market can accommodate. The number of unemployed young people - both without and with university degrees - has increased, estimated at about 760,000 as of 2003 (*Yonhap News*, 28 November 2003). The increasing unemployment can be understood in line with the rapid expansion of higher education, but it is more directly related to the changing conditions of recruitment after the 1997-98 economic crisis and the subsequent economic restructuring commanded by IMF on neo-liberal global market principles. The further increase in the rate of enrollment in higher education in Korea at present can be understood as a way to avoid becoming unemployed. The education-based class system is notable in South Korea where white-collar-educated managers treat people without a college education, including skilled workers with vocational or technical training virtually as 'second-class citizens' (Kim, 2005). However, despite the rising number of the unemployed among higher education graduates, there is a shortage of *quality* manpower in production and in other engineering fields in Korea.

Demographic pressures:

In Japan and Korea, the biggest pressures – which are literally forcing institutions to accede to the new ideologies promoted by the government – are demographic. The Japanese case is the more dramatic, though the Korean case (see Weidman and Park, 2000: 2) is not far behind. The population of 18-year-olds (the age when the vast majority apply for university) in Japan peaked at 2.05 million in 1992 and has

declined ever since to 1.51 million in 2000 and an estimated 1.2 million in 2010 – a drop of 26% in 8 years or 41% in 18 years (Doyon, 2001: 445; Arimoto, 1997: 205). While some of this drop in the absolute number of 18 year old in the population was compensated for by an increasing proportion going on to higher education, the evidence suggests that by 2000 the proportion likely to seek tertiary education had begun to plateau. Sometime between 2007 and 2009 according to differing estimates (Doyon, 2001: 445; Royama, 1999: 22), the places available in higher education institutions will be the same as the number of applicants. As mentioned above, higher education supply in Korea is now exceeding demand. This is especially visible among the higher education institutions located in provinces outside the Seoul metropolitan. This does not mean, of course, as some have intimated (see Obara, 1998) that competition to get into university will disappear altogether; this will remain intense in the case of those still seeking to gain entry in to the best institutions. It does mean, however, that many of the lower-level universities are going to find it very difficult to survive and indeed there are already signs of the effects of this in Japan. Survival will depend on their ability to find new markets.

Political Developments

Some of the political developments in the region have doubtless made it easier for Anglo-Saxon market liberalist policies to be applied than would have been the case only a decade earlier. In Japan, this trend can be seen starting back in the 1980s, but Korea at that time was under the control of a military dictatorship which was loathe to give too much autonomy to any of its institutions and perhaps particularly not to its universities in societies where students and professors historically had always enjoyed more moral authority than the military. In both Japan and Korea, deregulation has become a buzzword for re-stimulating their respective economies.[4]

The Growing Status of Vocational Higher Education in Japan and Korea

It is a strange coincidence (but nothing more than a coincidence) that the bursting of the Japanese economic bubble coincided almost exactly with the peak of the number of eighteen-year-olds (the group who have provided well over 90% of all university entrants) in the Japanese population. This generation, the second post-war baby boom, peaked at 2,050,000 in 1992 and then began a steady decline (31.2%) in numbers to around 1,410,000 in 2004. Due to the rapidly decreasing birth-rate in Japan since the late 1980s, there is no third baby boom on the horizon and the number of eighteen-year-olds will continue to decline to 1,183,000 in 2012 (an overall decrease of 42.3% over twenty years). The full effect of this

[4] In Japan, there was a University Deregulation Law in 1991 which has been widely supported in the context of a general climate of deregulation (*kisei kanwa*) under the Koizumi cabinet which has led education ministry officials to believe they should not intervene in the case of new universities being established as long as the meet the minimum standards required. In Korea, the 1997 higher education reforms specifically reduced government regulations and made it easier to establish new universities (Kim and Kim, 2004: 2). In both cases, the education ministries recognise that the absolute number of college students will shrink over the next two decades leading to some higher education institutions either being closed or merged. Overall, the contemporary post-developmental states in East Asia are vulnerable and permeable to neo-liberal global market forces.

demographic shift has not *yet* been felt by the higher education institutions because between 1992 to 2002 - despite the drop in the *total* number of those leaving senior high school (and in Japan only about 4% of the age group do not complete senior high school, even though it is non-compulsory education) - the *proportion* going to university actually increased by 21.9% as the rate of advancement to universities of this group went up from around 37% in 1992 to just under 49% in 2002.[5]

The major consequence of these developments has been hyper-competition between institutions. Many of Japan's two-year junior colleges (*tanki daigaku*) faced dwindling applications and converted into four-year institutions, escalating the competition among universities. In 1992, with 541 institutions (88% of them private) *tanki daigaku* constituted over 44% of all of Japan's university institutions and catered for nearly 23% of all university students (around 92% of their in-take being female); by 2004 they catered for only 9.6% of all university students, as more and more women entered higher status four-year institutions.[6] It is against this background of hypercompetition and economic pessimism that *senmongakko*, Japan's two-year post secondary vocational schools, made a meteoric rise -- almost unnoticed by the rest of the sector and certainly without much aid from the state. As we shall see, almost exactly the same pattern appears to be emerging in Korea.

PRE-WAR AND POST-WAR *SENMONGAKKO* IN JAPAN

As Yamamoto (1997: 295) explains it, in the pre-war period Japanese higher education operated on a 'double-track' system in which the educational track to universities was kept separate from the track to vocational schools and while the private non-vocational higher education system was left to fend for itself financially, vocational education received very high levels of state subsidy.[7] Following the National Subsidy for Vocational Education Act in 1920, vocational continuation schools subsidies became very substantial (Sato, 1987: 64). According to Okada (2005: 35) these pre-war *senmongakko* could not have university status because

[5] Indeed, during the period 1992-2004, the number of four-year universities actually increased by an even faster rate than the decrease in the eighteen-year-old population. In 1992 there were 98 national, 41 public and 384 private four-year universities in Japan; in April 2004, there were 88 national, 77 public and 545 private four-year institutions, an overall increase of 31.9%.

[6] It is interesting to note, in this context, that junior colleges (*tanki daigaku*) were initially established only on a provisional basis in 1950 - because not all institutions which wanted to upgrade to being universities in the post-war system were considered to be of a high enough standard - and they were only accepted as a permanent feature of the education system in 1965 (Teichler, 1997: 278). Not long after, in 1969, as Cummings (1976: 69) recounts, several junior colleges went bankrupt as the level of debt in all private institutions increased severely, precipitating the student revolts which marked universities in Japan during the early 1970s. There is no doubt, therefore, that the junior college sector in Japan, which caters almost exclusively to female students, has provided a useful 'buffer zone' during the development of higher education in the post-war period.

[7] Chapters in Toyoda's (1987) edited volume list the subsidies which were given to set up and maintain schools in woodwork, lacquerware, ceramics, dyeing and weaving, bamboo working, commerce, agriculture and forestry.

'they specialised in only one discipline while a university was defined as an institution teaching numerous disciplines'.

In the immediate post-war period, however, many of these *senmongakko* were given university status, so it was somewhat ironic that it was the development of the so-called 'single-track' system at that time which led to the clear hierarchy developing in which vocational education had lower status than academic education. As both secondary and then tertiary education moved into the mass era in the post-war period, both the status of and the state subsidy for vocational education dramatically reduced and into the vacuum there grew a large number of unregulated and non-state supported institutions known as '*kakushu gakko'* (miscellaneous schools'). It was only with the revision to the education law in 1975 that *kakushu gakko* were allowed to apply for status as *senshu gakko* and that many of those which obtained that status were designated as *senmongakko*, a term for educational institutions which had not been seen for thirty years.

Vocational education in Japan has been characterized by a number of features in the post-war period. Primary among these has been the fact that it has been extremely uncoordinated. As Dore and Sako (1998: 167) succinctly put it, 'In whatever other respect Japan might be a model to us all, national policy co-ordination in the field of vocational education and training is not its strong point'.

At high school level around 25% of 15-18 year olds attend vocationally-oriented schools where a minimum of 30% and on average around 50% of courses are of a non-vocational type in such as maths, Japanese and a foreign language. These schools, however, are rarely attended by the top 10% of students and more often than not pick up those towards the bottom end of the educational achievement hierarchy as there remains a bias towards academic schooling. This is seen most clearly in the relatively low proportion of entrants to these institutions who graduate from them at the end of three years.[8] Indeed as the Japanese economy expanded, apparently inexorably, in the post-war period, the status of vocational education seems to have dipped.

Of course attendance at a vocational high school does not preclude taking vocationally-oriented courses at university and indeed, depending on one's definition, a substantial proportion of students in Japan do courses, such as science (3.5%) and engineering (19.5%), which might be considered vocational in nature. As discussed above, the university sector in Japan was established in the first instance to provide support for economic development rather than individual growth. However, even in science and engineering courses, there remains today a much greater emphasis on general education and one-way lectures than on practical work and placements compared to courses in most North American or European universities. Writing in the

[8] In the last few years, there have been some calls to recognise the importance of vocational high schools and for their status to be raised. This is particularly in the light of the perceived relevance of their courses for securing employment in the current economic recession (see, for example, Trelfa, 1994). Research by Honda (2005) indeed even suggests that graduates from vocational high school have better interpersonal skills and lower levels of anxiety about their futures than those from supposedly superior high schools and uses this to argue for the revitalisation of the vocational high school system and for more vocationally-relevant education in academic high schools.

1980s (when the so-called Japanese model of employment was probably at its zenith) Kinmonth (1986: 411) pointed out this was largely because companies which hired graduates from universities even in sciences were less interested in what they did there than where they have been; around 40% within 2-3 years in any case would be following a specialism in the company quite different from what they had studied in university.

At the end of the 1980s, as the absolute number of those entering higher education in Japan was about to hit its peak, Amano (1989) made a number of interesting comparisons between the vocationally-oriented *senmongakko* and two-year junior colleges in Japan. The former concentrated on the professions and semi-professions, the latter on domestic skills; the former were relatively gender-balanced, the latter female dominated; the former were concentrated in cities, the latter were scattered and decentralized locally-based institutions throughout Japan (which was in the 1990s to become one of their biggest problems because they could neither register students nor guarantee them employment); the former were relatively free from government intervention, the latter were highly regulated, even though in both cases over 90% of institutions were private and almost all of them are for full-time students.

At the same period, Abe (1989: 76) made a number of interesting comparisons between *senmongakko* and four-year universities. The former indeed, he felt, had several advantages for reforming themselves in the next decade over the latter: they were required by the state to spend less on meeting the regulations of the central government; they were not prevented from setting up new campuses in metropolises as universities were at the time; their founders and heads were not faced with having to deal with conservative professors' councils when they tried to reform but had a fairly free hand (see Hatakenaka 2005 for more on this); they could matriculate and graduate students into the employment market much faster.

The above background is needed to understand the significance of the fact that, almost unreported,[9] the proportion of higher education students going to full-time post-secondary non-university vocational schools (*senmongakko*) has doubled over the past fifteen years from 10% to 20% of all school leavers.[10] It is a curious fact, as the Dearing committee reported after its visit to Japan in the mid-1990s, that these students have traditionally been excluded from the figures of those attending post-secondary education in Japan. Their courses are full-time and their campuses are often impossible to distinguish from colleges. Many *senmongakko* have a long history (some can trace their foundation to the nineteenth century); the largest have over 2000 students. They are almost all private and charge fees which are towards

[9] Dore and Sako (1998: 171) comment on the complete absence of reports on vocational education (shokugyo kyoiku) in a database search of a major Nagoya newspaper in 1997. The same search returned 1444 articles with the word 'university' (daigaku) in them.
[10] Regional variations in these figures are huge: almost twice as many school leavers proportionally go on to senmongakko in Niigata (29.1%) as in Tokyo (15.3%). At the same time, almost five times as many school leavers proportionally go directly into paid jobs in Miyazaki (31.3%) as in Tokyo (6.8%) and only 60% as many go on to university in Okinawa (31%) as in Tokyo (53.5%).

the top end of the scale for private universities.[11] The only difference is that their courses are vocationally-oriented and offer qualifications that are recognised by employers in their own right. If they are included ni the figures, then the total proportion of students in post-secondary education in Japan is much closer to 70% than the figure of 50% that is normally given.

ATTEMPTING TO DEFINE VOCATIONALLY-ORIENTED HIGHER EDUCATION INSTITUTIONS IN JAPAN (*SENMONGAKKO*)

So what are *senmongakko*? It is always difficult to give exact equivalents of educational institutions when comparing systems in different countries. The most common generic term, following revision of the basic Education Law in 1975, for specialist non-university post-secondary vocational schools in Japan is *senshugakko*. These are institutions which are allowed to offer three types of programmes: (a) *ippan katei* (general programme), which his open to anyone to attend; (b) *senmon katei* (literally specialist programme), which is open to anyone who has a higher school leaving or better diploma[12]; and koto katei (high school programme which is designed as the second half of a four-year programme for middle school graduates), a programme which was set up in the immediate post-war period and has shrunk almost to the point of invisibility. Of the total, roughly 3200 *senshu gakko*, just under 3000 (ie. almost 92%) offer senmon katei courses and these institutions are more generally known as senmongakko.[13]

[11] Due to the basic economic rules of inelastic demand, the lower the level of an institution in the educational hierarchy, the higher the fees it charges as students have less options to draw from. This rule would also appear to have applied to senmongakko as a set of institutions at the bottom of the higher education hierarchy. Overall, the burden of higher education on individual families have risen substantially in the past three decades: in 1970, the average fee at a national university was less than 2% of the disposable income of a modal family, by 1990 it was 5%; in the case of private universities, the average costs rose from 6% to10% over the same period. These costs were clearly much higher in the case of families sending their children to the lower level, more expensive private universities, particularly given that these families were on average earning lower incomes since wealthier families dominated entrance to state and high level universities (in part through investment in high-quality cram education in order to gain entrance).

[12] As Amano (1989) points out, as secondary education become the norm in the 1970s, so vocational education came more closely associated not with those who had completed compulsory education (up to age 15) but those who had completed senior high school (at age 18). The development of the new category of institutions called senmongakko were meant to recognise this change.

[13] In 2005, there were 791,540 students registered in senshu gakko; 48,987 on the koto katei (6%); 45,725 on the ippan katei (5.7%) and 696,828 on the senmon katei (88%). In the previous ten years, the numbers enrolling on the koto katei programme had more than halved, the numbers no the ippan katei had decreased by 17%, while the numbers enrolling in senmongakko programmes had remained very steady. Dore and Sako (1998: 67) point out that the system is actually much more complicated yet in that senshugakko refer only to those post-secondary non-university vocational education and training institutions which are recognised by the Ministry of Education. There are also a institutions accredited by the Ministry of Labour and the Ministry of Health which are not included due to reasons of Ministerial sectionalism. These howver have been declining in number in recent years and hence do not need to form a major part of this study.

As we have seen above, there is, in general, a division of functions in people's perception in Japan between universities/junior colleges that teach theories and principles and *senshu gakko/senmongakko* which teach market-oriented skills.[14] Many qualifications that in the UK or the US would be earned at universities - in the UK at the new universities which used to be called polytechnics - in Japan have to be earned in senmongakko. Moreover, unlike the UK and the US where the two sectors have become increasingly intertwined, rigid Japanese regulation has tended to keep them apart so that it has been very difficult for senmongakko to become or merge with universities or for universities to offer credit courses to students from senmongakko.

In 1999, largely under pressure from private universities and colleges concerned about falling enrolments, a relaxation in the educational law finally allowed those who had achieved the degree of *senmonshi* from a *senmongakko* (requiring at least 1700 hours instruction) to transfer to a junior college or university. This also meant of course that senmongakko were no longer dead-end courses but could be seen as part of a four-year university degree. In each of the first two years following this relaxation, however, less than 1000 students took up the opportunity; in 2005 the number was around still only around 2,000.

On the other hand, not only are many students entering *senmongakko* on completion of their university or junior college degrees but over 25,000 students a year are dropping out of university (forfeiting their entrance and annual fees) in order to re-enrol in *senmongakko*- which is a non trivial accomplishment in a country that is known for hypercompetition for university entrance.[15] Staff who teach in *senmongakko* enjoy increasingly high status and are often headhunted to come and work in universities; many students attend *senmongakko* at the same time as they attend regular university (so-called 'double-schoolers');[16] *senmongakko,* which in the

[14] A good example would be in the teaching in English. In university settings, English is mainly taught as a literary exercise in reading and writing; many classes focus on the literary specialisms of the professors, such as Shakespeare or the Romantic poets, and there is little emphasis, or testing, or oral communication skills. Teachers of English at senmongakko have highly developed oral skills and if someone needs a qualification in communicative English (the so-called Eiken system), for example to be a pilot, then it makes more sense for them to enrol at a senmongakko than at a university.

[15] It would appear that pre-2000 no statistics were kept nationally on the proportion of those entering *senmongakko* who had graduated from university; by 2005, there were around 20,000 such new entrants and around 6400 who had graduated from two-year colleges. There is some data on the wage premium obtained from attending *senmongakko* compared to entering the work force straight from senior high school (the premium is around 10%) but as yet none, as far as we are aware, on the comparative premiums of graduating from *senmongakko* compared to graduation from two or four-year colleges.

[16] Kinmonth (2005: 125) cites a 1999 survey which suggests that 26% of students were double-schooling. Abe (1989: 76) mentions this phenomenon beginning to emerge during the bubble economy in the 1980s so its appearance should not be directly linked to the economic problems of the subsequent decade. He (1989: 77) saw *senmongakko* filling a very particular niche in the higher education system and did not foresee universities trying to compete directly with them, suggesting that the relationship was like that between community colleges and universities in the US. He does suggest though that the institutions could be complementary which is why certain private university operators were beginning to set up *senmongakko* alongside their campuses.

1970s were dominated (80%) by female students, are now roughly 50:50 in their gender balance;[17] the teaching in *senmongakko* has changed from a focus on domestic science subjects to the majority of students (now close to 85% of the 800,000 students in total) on industrial, business, education, welfare and medically-oriented topics;[18] while the success rate in finding a job has dropped among university male graduate from around 80% to 60% during the 1990s, the rate for those from *senmongakko* has remained consistently around 80%;[19] *senmongakko* are known for their tight management and financial health at a time the post-secondary education sector as a whole is ailing.

This is not to say that they emerged without turmoil. *Senmongakko* leaders recollect how the 1990s was an era of hyper competition when many of them went out of business – while the government paid little attention to what was happening to fee-paying students in these schools. Nor are they uniform in their content or quality. They are, as have seen, the products of unregulated markets or what Dore and Sako (1998: 91) describe as 'an almost pure market sector'.

ATTEMPTING TO DEFINE VOCATIONALLY-ORIENTED HIGHER EDUCATION IN KOREA (*JEONMUN DAEHACK*)

As we have seen, Korea has a very similar higher education system to Japan, characterized by a very large private sector and a strong social demand for university education which has made university entrance, especially at the top end of the scale, extremely competitive. One key difference between the two systems is that higher education institutions in Korea have a tradition of vocation-oriented education, which according to Kim (2001) ironically (in that it does not exist in Japan) can be attributed to the legacy of Japanese colonial higher education.[20]

A type of higher education institutions called "Junior Colleges" in Korea in English and *jeonmun daehack* in Korean offer two or three-year post-secondary vocational

[17] There are, of course, big gender differences by programme in *senmongakko*: 72% of those in education and social welfare courses are female, 84% in domestic science. (For an interesting article on gender stratification in Japanese private higher education institutions, see Nagasawa, 2005).
[18] Senmongakko are divided into eight fields of specialisation: medical, such as nursing (27/6%); culture and languages, including interpreting (21.1%); industrial, including construction and mechanics (15.9%); services affected by hygiene regulations, including cooking, 12%; commerce, including accounting (10.0%); education and social welfare, including child care and care of the elderly ((8.8%); fashion and domestic science (4.4%) and agriculture (0.3%).
[19] Some senmongakko guarantee employment to all those who complete their courses.
[20] During the colonial period (1910-1945), the Japanese colonial government promoted vocational and technical education in Korea as a part of the colonial state's modernisation project. Given the urgent necessity of disseminating industrial skills to establish and run modern colonial systems in Korea, the Japanese colonial government established two Industrial Schools - one in Seoul and the other in Pyong-yang. The standard of the Industrial School then was between primary and higher education and the stress was on practical skills. Apart from those of college grade, there were 140 vocational and industrial schools, mostly elementary industrial schools, with the others being concerned with agriculture, commerce and fishing.

education programmes. Their institutional status and educational functions appear to lie somewhere betwen Japanese *senmongakko* and junior colleges (*tanki daigaku*). The purpose of *jeonmun daehack* education is to produce middle-level technicians equipped with a solid base in both theories and practical skills. Specialised courses offered at junior colleges are grouped into engineering, agricultural, fishery, nursing, health, home economics, social work, arts and athletics and so on, with two or three year programmes, depending on the courses.

The hierarchical structure in the Korean higher education market has been recognized for a long time and the institutions in the top two deciles are completely dominated by four-year universities.[21] However, in the middle range, *jeonmun daehack*, most of which are located in the Seoul metropolitan area, are quite competitive. This reflects the popular notion that some of the two-year *jeonmun daehack* produce marketable diplomas that are well received in the labor market, such as the nursing and information technology fields, even though the labor market is flooded with college graduates and the college premium has decreased substantially. The employment rate of *jeonmun daehack* graduates in 2004 was 18.1-21.5% higher than that of four-year university graduates (Korean Council for College Education, 2005:41).

RECENT DEVELOPMENTS

By the 1990s, the *senmongakko* had come to be widely accepted as an established, post-secondary, vocational training institution within the educational system. This has lead to the formalization of the *senmongakko*, in such a way that they effectively approach the academic schools in character through:

1. Extension of training period (most schools now require at least 2 years and many require more)
2. Increasing full-time, day-time students and decreasing numbers of 'evening' students, which means that the student population is comprised mainly of high school graduates, and that the senmongakko have achieved a formal status as post-secondary educational course.
3. Increasing numbers of schools that have become legal entities known as gakko-hojin or jun-gakko-hojin, which bring with it some minimal advantages for gaining public funding.

In explaining how the status of *senmongakko* has risen in Japan sine the late 1980s, Han (1996), a Korean scholar based in Japan and one of the very few academics to have looked at the issue, outlines the following features:

[21] The only exception is the two-year Agricultural Cooperative College, which has no tuition (Kim and Lee, 2005).

- Mass higher-education:
  - The universalization of high school education and the expansion of average school years has lowered the status of high school stage vocational training and increased demand for post-secondary vocational training.
  - Increasing numbers of private universities are available to absorb popular demands for higher education which has made it harder for university graduates to find white-collar jobs, while vocational qualifications from *senmongakko* are seen as leading to more stable employment.
- Shifting employment market towards service-oriented businesses and trends towards 'professionalization'
  - The changing market demands require new types of vocational training to adjust the workforce to accommodate service-oriented businesses. In addition, there are increasing demands for new skills such as information technology which require a trained workforce.
- Changes in attitudes towards work among youth
  - Importance of balancing private life and work;
  - Demise of life-time employment; increasing professional jobs that cut across companies and greater identification with the profession rather than the company.

According to Han (1996), the curriculum of *senmongakko* are also characterized in the following ways:

1. Little regulation or constraints and lots of freedom for schools to develop their own curriculum; while this may lead to flexible or innovative curriculums, it also leads to its 'private' character and to variations in quality across schools.
2. Oriented towards employment, the curriculum is organized in accordance with the practical needs of society.22
3. Aimed at gaining qualifications (passing qualification exams)
4. Emphasis on developing an immediately employable workforce.

However, these very characteristics point to various dilemmas internal to *senmongakko:*

1. The privately-run character of the schools can mean their public role as educational institutions is replaced by concern for financial stability, relying mostly on high student fees;
2. While the schools aim to develop 'specialists,' their increasing normalisation as a post-secondary educational course forces them to consider also the value of general education. While on the one hand, the senmongakko seek to produce 'immediately employable' graduates, 'immediate employability' can also mean less flexibility and longevity; a valuable work-force in the long-term requires an education that develops the whole person with an all-round education as generalists who can cope with changing demands and situations;
3. The open-ness of the senmongakko and their accessibility to a wider population compared to universities also conflict with their aim for higher specialisation. If

[22] For a good overview of the current youth employment market in Japan and in particular on how it has changed in the past decade, see Rebick, 2005: 140-55.

it is the case that senmongakko are more accessible to students who do not enjoy studying or with lower academic ability, it may be difficult to produce highly-skilled specialists, thus reproducing these institutions' low social status.

CONCLUSIONS AND ISSUES FOR FURTHER RESEARCH

Japan and Korea represent two very different ways in which vocational education developed at the post-secondary level in a societal context in which academic education was clearly preferable. In Japan, vocational education was principally undertaken by *senmongakko*, which were hardly recognised to be part of the higher education sector until very recently. Market forces rather than government regulations dominated their behaviors and as such leading *senmongakko* are known for their responsiveness to changing market needs – both of employers and students.

In Korea, vocational higher education has always been part and parcel of the higher education sector where *jeonmun daehack* have traditionally provided vocationally oriented courses at undergraduate levels. They have been subject to quality related regulations by the government [*check*], for instance, in terms of the staff-student ratios and staff qualifications as well as physical facilities.

And yet, there are also key similarities. First, both sectors are dominated by private school authorities, which are supposedly not-for-profit, but seem to operate in a manner similar to for-profit colleges in other countries. Second, they have also been regarded as poorer options in comparison with universities and have traditionally had difficulties in attracting good students. Third, they are today facing much more intensive competition for survival both domestically and globally.

The ongoing evolution of *senmongakko* in Japan is important is several aspects and provide an important historic opportunity for observation. First, they are emerging in an unregulated segment of the education market, which would allow us to understand the way markets shape educational institutions.[23] Second, their evolution is not complete and so it is be possible to capture some of the process dynamics.

The phenomenon is likely to shed light on several important questions about the much debated roles of market and state in education. If unregulated *senmongakko* have been more successful than regulated universities and junior colleges in meeting the social demand, what can we learn about the role of market forces in education? What has been the social cost associated with the lack of state involvement, in terms of closures and low quality institutions?

A study of *senmongakko* will bring into sharp relief at least two of the major assumptions that seem to underlie UK and most other vocational post-secondary education in OECD countries:

[23] A good example of the success of unregulated sectors in the market can be seen in the growth of new schools established by corporation (kabushiki kaisha) which offer CPA courses specifically designed to enable those who take them to work in the US, as accounting and business courses taken at registered senmongakko are not recognised by US states as qualification for sitting US CPA exams (see Kawahito, 2004).

1. That the state – and not the individual or the family – should provide the financial support for vocational education (senmongakko, unlike even private universities in Japan, receive very little public financial assistance);
2. That unregulated educational institutions would be inappropriate for 'education' as they would cut corners and not deal with students educational needs.

The Korean case appears to make an interesting contrast with that in Japan because the development of vocational higher education has been much more closely regulated by the state.[24] In part this has been because Korea did not have a system such as in Japan where the two-year colleges (*tanki daigaku*) and *senmongakko* competed for space in the market but *jeonmun daehack* which appear to have combined the functions of these institutions. On the other hand, despite the Korean government's regulation over vocational higher education institutions based on human resources development policy, there has been a notable deficiency in terms of both financial allocation[25] and clear, consistent strategies for the development of *jeonmun daehack*.

[24] It is significant that the number of national senmongakko in Japan collapsed from 155 in 1995 to a mere 15 in 2005, while the number of private institutions increased by over one hundred in the same period. In Korea, on the other hand, the number of state-run senmongakko has increased over the past decade.

[25] In 2004, the Korean government allocated 175,000,000,000 KRW (equivalent to 97,106,812 GBP) funding for junior colleges, which is only one tenth of the amount of funding allocated for the four-year university sector. Overall, the Korean government's budget for higher educational institutions is only 0.4% of GNP, which is much lower than the OECD average 1%. The Korean government's funding for higher education has been mainly allocated to national universities. This funding policy has left most private higher educational institutions seriously lacking financial resources. Kim and Lee (2005) emphasises the government needs to devise a mechanism in which private and public universities can increase fiscal capability. One possible solution would be/ to permit the institutions, especially *jeonmun daehack*, to engage in for-profit activities as long as the profits earned are circulated to the primary mission of the institution (Kim and Lee, 2005).

SOME KEY REFERENCES (all other references available on request):

Abe Yoshiya (ed.), *Non-University Sector Higher Education in Japan*, Hiroshima: Research Institute for Higher Education.

Amano, Ikuo, 1989. *Socio-economic role of the non-university sector*, pp. 67-71 in Abe Yoshiya (ed.), *Non-University Sector Higher Education in Japan*, Hiroshima: Research Institute for Higher Education.

Amano, Ikuo, 1997. *Structural Changes in Japan's Higher Education System: From a Planning to a Market Model*, in *Higher Education*, 34: 125-39.

Amano, Ikuo, 1999. *Daigaku – Chôsen no Jidai (Challenges to Japanese Universities).* Tokyo: Tokyo University Press.

Arimoto, Akira, 2000. Recent *Developments of Higher Education Research and Higher Education Policy in Japan*, pp. 93-106 in Teichler, Ulrich and Sadlak, Jan (eds.), *Higher Education Research: Its Relationship to Policy and Practice*, Oxford: Pergamon.

Azumi, Koya, 1969*. Higher Education and Business Recruitment in Japan.* Teachers. New York. College; Columbia University, Institute of International Studies.

Bertholomew, James, R, 1989. *The formation of science in Japan: building a research tradition*. New Haven and London: Yale University Press.

Cantor, Leonard, 1985. Vocational Education and Training: The Japanese Approach, Comparative Education*, 21/1: 67-76.*

Cummings, William K., 1997. Human Resource Development: The J-Model, pp. 275-91 in Cummings, William K. and Philip G Altbach, The Challenge of Eastern Asian Education: Implications for America*. New* York: State University of New York Press.

Cummings, William K., 1999. The Institutions of Education: Compare, Compare, Compare! in Comparative Education Review, Vol. 43 (2): 413-37.

Currie, William, 2002. *Japans Top 30 Universities*, *International Higher Education*, 26/14, Winter (Center for International Higher Education, Boston College Website)

Cutts, Robert L., 1997. *An Empire of Schools: Japans Universities and the Molding of a National Power Elite*. New York: M.E. Sharpe.

Dore, Ronald and Sako, Mari, 1998. *How the Japanese Learn to Work* (Second Edition), Nissan Institute/Routledge Japanese Studies Series, London and New York.

Eades, Jerry, 2001. *Reforming Japanese Higher Education: Bureaucrats, the Birthrate and Visions of the 21st Century*, pp. 86-101 in *Ritsumeikan Journal of Asia Pacific Studies* (Special Issue: Higher Education Reform in East Asia: A Comparative Perspective), Roger Goodman, Guest Editor, Vol. 8, December 2001

Eades, J. S., Goodman, Roger and Hada, Yumiko, *The Big Bang in Japanese Higher Education: The 2004 Reforms and the Dynamics of Change*. Melbourne: Trans Pacific Press.

Hall, Ivan P., 1998. *Cartels of The Mind: Japan's Intellectual Closed Shop*. New York and London; W.W. Norton.

Han Min, 1996. *Gendai Nihon no Senmongakko: Koto Shokugyo Kyoiku no Igi to Kadai: Vocational Schools of Contemporary Japan: Themes and the Significance of Higher Vocational Education*, Tokyo: Tamagaka Dagiaku Shuppanbu.

Hatakenaka, Sachi, 2005. *The Incorporation of National Universities: The Role of Missing Hybrids*, pp. 52-75 in Eades, J. S., Goodman, Roger and Hada, Yumiko, *The Big Bang in Japanese Higher Education: The 2004 Reforms and the Dynamics of Change*. Melbourne: Trans Pacific Press.

Hatakenaka, Sachi, 2004. *University-industry partnerships in MIT, Cambridge and Tokyo: Storytelling across boundaries*. New York: Routledge.

Honda, Yuki, 2005. *"Tajin nōryoku kakusa" ga nīto wo umu* (The danger of obsession with academic ability), pp. 82-91 in *Chūō Kōron*, April.

Hong, M-J, 1992. *Japanese Colonial Education Policy in Korea*. Unpublished Ed.D. dissertation, Harvard University.

Iwanaga, Masaya, 1989*. Finance and administration in the non-university sector*, pp. 45-55 in Abe Yoshiya (ed.), *Non-University Sector Higher Education in Japan*, Hiroshima: Research Institute for Higher Education.

James, Estelle and Gail Benjamin, 1988. *Public Policy and Private Education in Japan*. Basingstoke: Macmillan.

Kaneko, Motohisa, 1997. *Efficiency and Equity in Japanese Higher Education* in *Higher Education*, 34: 165-81.

Kawahito, Kyoshi, 2004. *Japanese business schools as senmongakko, with special reference to the U.S. CPA examination*, *Japan Studies Review*, 8: 85-95.

Kim Byoung-Joo, 2000. *Statistical trends in Korean higher education*, 1965-1996. Pp. 237-56 in Weidman, John C., and Namgi Park, (eds.), *Higher Education in Korea: Tradition and Adaptation*. New York: Falmer Press.

Kim Jongchol, 2000a. *Historical development*. Pp. 7-53 in Weidman, John C., and Namgi Park, (eds.), *Higher Education in Korea: Tradition and Adaptation*. New York: Falmer Press.

Kim, Seung-Bo and Kim, Sunwoong, 2004. *Private Universities in South Korea, International Higher Education*, No. 37, Fall (Center for International Higher Education, Boston College Website)

Kim, Sunwoong. and Lee, Ju-Ho 2005. *Changing Facets of Higher Education in Korea: Market Competition and the Role of the State*, *Higher Education* (forthcoming).

Kim, Terri, 2001. *Forming the Academic Profession in East Asia: a Comparative Analysis,* New York and London: Routledge.

Kim, Terri, 2005. *Old Borrowings and New Models of the University in East Asia*, in *Globalization, Societies & Education*, Special Issue: *Globalization, Changing Nature of the State and Governance in Education*, 3 (2) (In press).

Kinmonth, Earl, *From Selection to Seduction: The Impact of Demographic Change on Private Higher Education in Japan*, pp. 106-35 in Eades, J. S., Goodman, Roger and Hada, Yumiko, *The Big Bang in Japanese Higher Education: The 2004 Reforms and the Dynamics of Change*. Melbourne: Trans Pacific Press.

Kitamura, Kazuyuki, 1997. *Policy Issues in Japanese Higher Education*, in *Higher Education*, 27: 141-50.

Korean Council for College Education, 2005, *College & Professional Education Newsletter*, January.

Lee. Jeong-Kyu, 1999. *Organizational Structure and Culture in Korean Higher Education*, in *International Higher Education*, 16: 7.

Lee, Sung-ho H, 1998. *Korean Private Higher Education Faces Economic Crisis in International Higher Education*, 13: 19-20.

Lee, Sung Ho, 1997. Korea, pp. 311-24 in Postiglione, Gerard A and Mak, Grace C L (eds.), 1997. *Asian Higher Education: An International Handbook and Reference Guide.* Westport, Connecticut and London: Greenwood Press.

Michio, 1971. *Higher Education in Japan: Its Take-Off and Crash* (translated by Jerry Dusenbury). Tokyo: University of Tokyo Press.

Nagasawa, Makoto, 2005. *Gender Stratification in Japanese Private Higher Education*, *International Higher Education*, No. 40, Summer (Center for International Higher Education, Boston College Website)
Ogawa Yoshikazu, 1999. *Japanese Higher Education Reform: The University Council Report*, in *International Higher Education*, 18: 22-23.

Okada Akito, *A History of the Japanese University*, pp. 32-51 in Eades, J. S., Goodman, Roger and Hada, Yumiko, *The Big Bang in Japanese Higher Education: The 2004 Reforms and the Dynamics of Change*. Melbourne: Trans Pacific Press.

Ôtsubo, Wakako et al., 2004. Kyôi no Senmongakkô: Daigaku yo Sayonara (The Amazing Phenonemon of Vocational Colleges: Good-Bye to Universities), Shûkan Diamond, 16 October.

Rebick, Marcus, 2005. *The Japanese Employment System: Adapting to a New Economic Environment*. Oxford: Oxford University Press.

Sato, Mamoru, 1987. *The Development of Vocational Continuation Schools*, pp. 46-69 in Toyoda, Toshio (ed.), *Vocational Education in the Industrialization of Japan*, Tokyo: The United Nations University.

Schoppa, Leonard James, 1991. *Education Reform in Japan: A Case of Immobilist Politics.* London and New York: Routledge.

Teichler, Ulrich, 1997. *Higher Education in Japan: A View from Outside in Higher Education*, 34: 275-98.

Toyoda, Toshio (ed.), 1987. *Vocational Education in the Industrialization of Japan*, Tokyo: The United Nations University.

Trelfa, Douglas Arthur, 1994. *Educating the Working Class: Perceptions of the Relevance of Schooling among Japanese Vocational High School Students*, Unpubilshed PhD thesis, University of Michigan.

Umakoshi, Toru, 2000. *Korean National Universities at the Crossroads*, in *International Higher Education*, 21/11: 18-19.

Yamamoto Shinichi, 1997. *The Role of the Japanese Higher Education System in Relation to Industry*, pp. 294-307 in Goto Akira and Odagiri Hirokyuki (eds). Innovation in Japan', Oxford: The Clarendon Press.

Yonezawa, Akiyoshi, 2001. *The Quality Assurance System and Market Forces in Japanese Higher Education*, in *Higher Education*, 38: 1-13.

Yonezawa, Akiyoshi and Baba, Masateru, 1998. *The Market Structure for Private Universities in Japan: How has Japan Achieved Mass Higher Education in the Private Sector?* in *Tertiary Education and Management*, 4/2: 145-52.